

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
)	
Carrier Current Systems, Including Broadband)	ET Docket No. 03-104
over Power Line Systems)	
)	
)	
Amendment of Part 15 Regarding New)	
Requirements and Measurement Guidelines for)	ET Docket No. 04-37
Access Broadband Over Power Line Systems)	
)	
)	

To: The Commission

COMMENTS OF CENTRAL STATION ALARM ASSOCIATION

The Central Station Alarm Association, and the related Alarm Industry Communications Committee (collectively "CSAA"), hereby submit the following comments on the Commission's Notice of Proposed Rulemaking ("NPRM") in the above captioned proceeding, regarding issues relating to the operation of Broadband over Power Line (BPL) systems.

The Commission had asked for information to evaluate the current status of BPL technology to determine whether changes in its Part 15 regulations are necessary to facilitate the development of this technology. As the Commission has noted, BPL systems use existing electrical power lines as a transmission medium to provide high-speed communications capabilities by coupling RF energy onto the power line. Because power lines reach virtually every community in the country, BPL has the potential to bring Internet and high-speed broadband access to persons and locations that currently have limited choices for such technologies. Moreover, BPL could facilitate less expensive and more convenient monitoring and other functions that may prove valuable to consumers and businesses.

STATEMENT OF INTEREST

The Central Station Alarm Association is a trade association that represents companies providing central station electrical protection services that are certified by the Underwriters Laboratories ("UL"),¹ Factory Mutual, and similar risk-rating agencies. CSAA's members provide vital alarm monitoring services to the public, and use both wireline and radio communications for this purpose. The Commission recognizes CSAA as a frequency coordinator for the private land mobile frequencies available under Part 90 of the Commission's Rules.

Over the past 20 years, the public has increasingly relied on private security services for fire, burglary and medical alert protection as the services of local law enforcement agencies' resources have become increasingly strained. The Commission recognized this as early as the 1960s when it carved out a small allocation of five channel pairs for central station alarm operations in the 450-470 MHz band within urbanized areas of 200,000 or more population, and made two of those frequency pairs available for use on a nationwide basis. *Frequency Allocations – 450 – 470 M c/s Band*, Second Report and Order, 11 FCC 2d 648, 653 (1968). Since that time, local governments have had difficulties in finding sufficient funding to provide additional staffing and all necessary equipment for police, fire and emergency medical services. As a result, many communities do not have enough personnel on the streets to respond to emergencies or to engage in public education activities to pro-actively train citizens in crime prevention, fire prevention and skills necessary to be a first responder to a medical emergency such as a heart attack or choking. Radios used in connection with central station alarm monitoring activities are generally low power operations that are used to relay burglar, fire and medical emergency alarm signals, all of which

¹ Services certified by Underwriters Laboratories are permitted to use the label "UL-listed."

are critical life-safety uses of this spectrum. Central station operations also use radios to dispatch emergency response personnel, and to communicate with appropriate public safety agencies.

Central station alarm operations protect a wide range of sensitive facilities from fire, burglaries, sabotage and other emergencies, including government offices, power plants, hospitals, dam and water authorities, pharmaceutical plants, chemical plants, banks, schools/universities, and other critical facilities that could become the target of terrorist attacks as well as other life threatening events. In addition to these commercial and governmental applications, central station alarm operations are protecting an increasing number of residential properties from burglary and fire. Citizens can even carry with them a wireless “panic button” that will summon the police on a priority basis in the event of an emergency. Similarly, alarm companies provide a medical alert service for obtaining an ambulance in the event of a medical emergency. In some instances, alarm companies utilize unlicensed low power devices to give their customers these options.

OVERVIEW

CSAA applauds the Commission’s desire to explore the provision of Internet and high speed broadband services in a potentially more economical fashion. The ability of BPL systems to monitor a home or place of business remotely over existing power lines may afford alarm companies a valuable new tool in providing effective central station monitoring services to the public. CSAA therefore wishes to see the development of BPL technology go forward.

However, the NPRM proposes regulations that would allow utility companies and perhaps also commercial services to proceed with BPL deployments in major metropolitan areas, where interference to existing radio operations is more likely to occur. More than 5,100 comments and reply comments have been filed in this matter. Although most of these appear to be from radio

amateurs concerned about interference to their high frequency radio communications in the 2-80 MHz range, several comments have been filed by other licensees and even governmental entities who believe that harmonics of the frequencies used for BPL systems may result in harmful interference up to 800 MHz and beyond. See, e.g., Comments of the National Telecommunications and Information Administration; Comments of the National Academy of Sciences through the National Research Council's Committee on Radio Frequencies (CORF) at p. 1; Comments of APCO Region 21 at p. 2 (Expressing concern about interference to public safety communications).

Because BPL systems use the existing power lines, CSAA is concerned that widespread use of BPL systems may interfere with the radio alarm transmissions from being received by CSAA members' central stations. Failure to receive such alarms may result in loss of life and property. There appears to be more than sufficient data in the record of this proceeding to raise serious concerns about the potential for harmful interference to existing radio services, both public safety and private. *See, e.g.*, Comments of APCO Region 21 and Reply Comments of the Wireless Communications Association International, Inc. And while the NPRM cites to the existence of BPL operations worldwide as a justification for moving forward with final regulations,² the Austrian Amateur Transmitter Federation (ÖVSV--Österreichischer Versuchssenderverband) (<http://www.oevsv.at/index.shtml>) reports that a BPL field test in the city of Linz was cut short as a result of excessive radio interference. ÖVSV, Austria's International Amateur Radio Union (IARU) (<http://www.iaru.org>) said in December that the Government Ministry for Commerce, Innovation and Technology closed down Linz Power Company's BPL pilot project because it was generating interference on the HF bands. It is reported that this issue came to a head because of a

² NPRM at para. 30.

Red Cross report that emergency services radio traffic during a disaster response drill last May suffered from massive BPL interference. Indeed, the Commission concedes in the NPRM (at para. 34) that “there is some potential for Access BPL to cause harmful interference to radio service,” although the likelihood for such interference is thought to be “low”. It is respectfully submitted that, where the licensees that may fall victim to interference are sending safety-related communications, a greater degree of caution must be used.

Moreover, uncertainty concerning interference potential does not serve the public utilities that will seek to implement BPL. The investment in a BPL system will no doubt be substantial, if BPL is to realize its potential to offer broadband capabilities on a ubiquitous basis. Utilities cannot undertake this effort and expense, only to be told to “shut down” if interference arises. The consequences are far different than, e.g., requiring a cordless phone user to stop operating. Therefore, the Commission’s BPL rules need to incorporate a careful and tested approach that will *ensure* that BPL systems can be implemented without causing harmful interference to existing licensees, and to promptly remedy any interference should it occur. This approach will best serve all concerned parties.

SPECIFIC COMMENTS ON THE FCC’S PROPOSALS

CSAA offers the following specific comments on the proposals set forth in the NPRM:

Emission Limits

CSAA supports the Commission’s proposal to continue requiring BPL systems to comply with the Part 15 unlicensed emission limits (NPRM at para. 33). Moreover, CSAA disagrees with those commenters who have suggested these limits can be relaxed for BPL systems (NPRM at para. 20), at least until more information on this issue is developed based on actual field

experience. The Commission cites a belief that harmful interference will only occur within a short distance of a BPL device.³ However, alarm radios must often operate in close proximity to the very power lines that will be carrying the BPL signals into the homes and businesses that are being protected. The Commission also notes that other Part 15 devices have co-existed with licensed operations.⁴ However, unlike other Part 15 devices, the power lines carrying BPL would in many cases be physically connected to the licensed radios that will suffer interference, via the power source.

The Commission also cites to its belief that the potential for interference will be mitigated because most public safety radio systems are designed to receive a signal significantly above the noise floor produced by unlicensed RF sources.⁵ However, alarm radios generally operate at relatively low power levels. This is of course true of unlicensed devices used by alarm subscribers, but is also the case for the majority of *licensed* central station alarm operations. Indeed, most of the channels designated by the Commission for central station signaling have been allocated to the Low Power Pool. Therefore, CSAA advocates that the Commission adopt additional measures to ensure that particular safety-related operations do not suffer harmful interference, as discussed below.

Additional Measures

CSAA supports the Commission's proposal (NPRM at para. 40) to require that BPL operators use adaptive interference control technologies. A requirement that BPL equipment have the capability to reduce power and/or change frequencies on a dynamic basis would help to

³ NPRM at para. 34.

⁴ NPRM at para. 34.

⁵ NPRM at para. 37.

mitigate the potential for harmful interference. CSAA also supports the proposals to require that BPL equipment incorporate an automatic shut-down feature; a wide range of potential operating frequencies; and an ability to remotely exclude at-risk frequencies.⁶ CSAA also supports the proposal to hold BPL operators to the interference shut-down requirements of Part 15, to the extent that harmful interference cannot be promptly eliminated short of a shut-down. Moreover, CSAA believes that BPL operators should be required to identify and notify existing licensees that may be affected by their proposed operations. Because the Commission has implemented a geographically-searchable computerized Universal Licensing System (ULS), and BPL systems will operate at fixed locations, this requirement should not prove too onerous. This function could be successfully handled by one or more of the existing clearinghouse entities appointed by the Commission, such as the Personal Communications Industry Association (PCIA). While these various measures should help to limit the harmful affect of BPL interference, they do not yet clear the way for immediate wide-spread deployment of BPL. As discussed below, further testing is needed.

Equipment Authorization and Measurement Guidelines

CSAA supports the Commission's proposal to retain the equipment verification requirement for Access BPL systems. However, the need to implement rigorous BPL testing protocols is indicated by the Commission's observation that "there are no existing measurement guidelines for this type of equipment."⁷ It is respectfully submitted that the Commission must identify and adopt measurement guidelines that are tested and certain before BPL systems can be deployed on a wide-scale basis. Once measurement procedures are in place that will allow BPL

⁶ NPRM at para. 42.

⁷ NPRM at para. 45.

operators to deploy their equipment with confidence that interference will not be caused to incumbent licensees, BPL deployment can proceed apace without the concern that a major investment will be stranded by a “shut down” order necessitated by unresolved harmful interference.

CONCLUSION

Based on the foregoing, CSAA urges a cautious approach in this matter until more testing is completed and results are evaluated

Respectfully submitted,

CENTRAL STATION ALARM ASSOCIATION

By /s/ John A. Prendergast
John A. Prendergast
Its Counsel

Blooston, Mordkofsky, Dickens
Duffy & Prendergast
2120 L Street, NW, Suite 300
Washington, DC 20037
(202) 659-0830

Dated: May 3, 2004